

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IRW

In re Patent Application of

Roy Payne et al

Atty. Ref.: 839-1521

Serial No. 10/705,820

Group: 3746

Filed: November 13, 2003

Examiner: Not yet assigned

For: METHOD AND APPARATUS TO REDUCE FLUE GAS NOX BY  
INJECTION OF N-AGENT DROPLETS AND GAS IN OVERFIRE  
AIR

\* \* \* \* \*

June 17, 2004

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

The following are submitted in the above-identified application in compliance with 37  
C.F.R. §§ 1.97 and 1.98:

**INFORMATION DISCLOSURE STATEMENT**

- |                                     |    |                                                                                                                                                                                              |          |
|-------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <input checked="" type="checkbox"/> | 1. | <b>PTO-1449 Pursuant to 37 CFR 1.97(b)</b><br>[within 3 months of filing or prior to 1st Office Action]                                                                                      | N/C      |
| <input type="checkbox"/>            | 2. | <b>Statement Pursuant to 37 CFR 1.97(c)</b><br>[before Final Office Action or Allowance]                                                                                                     | N/C      |
| <input type="checkbox"/>            | 3. | <b>Fee Payment Pursuant to 37 CFR 1.97(c)</b><br>[before Final Office Action or Allowance]                                                                                                   | \$180.00 |
| <input type="checkbox"/>            | 4. | <b>Statement &amp; Fee Payment Pursuant to 37 CFR 1.97(d)</b><br>[before Issue Fee payment]                                                                                                  | \$180.00 |
| <input checked="" type="checkbox"/> | 5. | A list of documents on Form PTO-1449 together with copies of each identified document and a translation or a concise explanation of each non-English language document is enclosed herewith. |          |

This paper is submitted in accordance with:

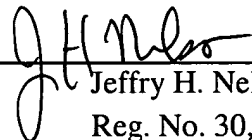
- |                                     |    |                                                                                      |
|-------------------------------------|----|--------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | 6. | 37 CFR 1.97(b): [within 3 months of filing or prior to 1st Office Action]            |
| <input type="checkbox"/>            | 7. | 37 CFR 1.97(c): [before Final Office Action or Allowance, whichever is earlier]; and |

- ☐ a) The Statement required by 37 CFR §§1.97(c)(1) and (e) made in item 9 below; or
- ☐ b) The fee specified in 37 CFR §1.17(p) for submission of this Information Disclosure Statement is authorized in item 10 below.
- ☐ 8. 37 CFR §1.97(d): [before issue fee payment]; and
- ☐ a) This is a request for consideration of the subject Information Disclosure Statement. The fee required by 37 CFR §1.17(p) is authorized in item 10 below; and
- ☐ b) The Statement required by 37 CFR §§1.97(d)(1) and (e) is stated in item 9 below.
- ☐ 9. Statement under 37 CFR 1.97(e)
- ☐ a) Each item of information contained in this Information Disclosure Statement was cited for the first time in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ b) No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement, after making reasonable inquiry, no item of information contained in this Statement was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
- ☒ 10. Please charge all applicable fees associated with the submission of this Information Disclosure Statement and any other fees applicable to this application to Deposit Account No. 14-1140. An original and one (1) copy of this document are enclosed.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By:

  
Jeffry H. Nelson  
Reg. No. 30,481

JHN:glf  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100

**INFORMATION DISCLOSURE  
CITATION**

ATTY. DOCKET NO.

839-1521

APPLICANT

Roy Payne et al

FILING DATE

November 13, 2003

SERIAL NO.

10/705,820

GROUP

3746

(Use several sheets if necessary)

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,413,477	05/09/1995	Moreland			
	5,572,938	11/12/1996	Leger			
	6,206,685	03/27/2001	Zamansky et al.			
	6,280,695	08/28/2001	Lissianski et al.			
	6,471,506	10/29/2002	Zamansky et al.			
	US 2001/0041157 A1	11/15/2001	Spokoyny			
	US 2002/0029690 A1	03/14/2002	Ridgeway et al.			
	US 2002/0102189 A1	08/01/2002	Madden et al.			
	US 2002/0166484 A1	11/14/2002	Zamansky et al.			
	US 2002/0170431 A1	11/21/2002	Chang et al.			
	US 2003/0009932 A1	01/16/2003	Kobayashi et al.			
	US 2003/0079606 A1	05/01/2003	Katz			
	US 2003/0091490 A1	05/15/2003	Nolan et al.			
	US 2003/0091948 A1	05/15/2003	Bool, III et al.			
	US 2003/0099912 A1	05/29/2003	Kobayashi et al.			
	US 2003/0099913 A1	05/29/2003	Kobayashi et al.			
	US 2003/0104328 A1	06/05/2003	Kobayashi et al.			
	US 2003/0104937 A1	06/05/2003	Sinha			
	US 2003/0108470 A1	06/12/2003	Spencer et al.			
	US 2003/0108833 A1	06/12/2003	Kobayashi et al.			
	US 2003/0110994 A1	06/19/2003	Lissianski et al.			
	US 2003/0143128 A1	07/31/2003	Lanier et al.			
	US 2003/0147793 A1	08/07/2003	Breen et al.			
	US 2003/0154858 A1	08/21/2003	Kleut et al.			

**FOREIGN PATENT DOCUMENTS**

DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)**

	"Kinetic Models For Predicting the Behavior Of Mercury In Coal-Fired Power Plants", C. Senior, et al., ACERC Annual Conference, February 19-20, 2003, pp. 1-22.
	"Evaluating The Effects of Low-NOx Retrofits on Carbon In Ash Levels <sup>1</sup> ", K.A. Davis, et al. Presented at the Mega Symposium: EPRI-DOE-EPA Combined Utility Air Pollutant Control Symposium, Atlanta, GA, August 1999, pp. 1-15.
	"Behavior of Mercury In Air Pollution Control Devices on Coal-Fired Utility Boilers <sup>1</sup> " Constance L. Senior, Prepared For Power Production in the 21 <sup>st</sup> Century: Impacts of Fuel Quality and Operations, Engineering Foundation Conference, Snowbird, UT, October 28-November 2, 2001, pp. 1-17.
	"Loss On Ignition In Coal Combustion Simulations", Stefan P. Domino et al., pp. 1-49 (1999).
	Reaction Engineering International brochure "Furnace Performance", Reaction Engineering International, printed from REI website on August 22, 2003, pp. 1-2.

*Examiner	Date Considered
-----------	-----------------

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

**INFORMATION DISCLOSURE  
CITATION**

ATTY. DOCKET NO.

SERIAL NO.

839-1521

10/705,820

APPLICANT

Roy Payne et al

(Use several sheets if necessary)

FILING DATE

GROUP

November 13, 2003

3746

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,604,474	08/12/2003	Zamansky et al.			
	4,196,173	04/01/1980	deJong et al.			
	4,233,274	11/11/1980	Allgulin			
	4,273,747	06/16/1981	Rasmussen			
	4,814,152	03/21/1989	Yan			
	4,843,102	06/27/1989	Horton			
	5,141,724	08/25/1992	Audeh et al.			
	5,409,522	04/25/1995	Durham et al.			
	5,695,726	12/09/1997	Lerner			
	5,787,823	08/04/1998	Knowles			
	6,027,551	02/22/2000	Hwang et al.			
	6,451,094	09/17/2002	Chang et al.			
	6,521,021	02/18/2003	Pennline et al.			
	6,558,454	05/06/2003	Chang et al.			
	6,595,147	07/22/2003	Teller et al.			
	6,719,828	04/13/2004	Lovell et al.			
	US 2002/0095866	07/25/2002	Hassett			
	US 2003/0005634	01/09/2003	Calderon et al.			
	US 2003/0185718	10/02/2003	Sellakumar			
	US 2004/0011057	01/22/2004	Huber			

**FOREIGN PATENT DOCUMENTS**

DOCUMENT	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

**OTHER DOCUMENTS (including Author, Title, Date, Pertinent pages, etc.)**

	"Comparison of Photoacoustic Methods To Loss-On-Ignition and Foam Index Tests In Fly Ash Evaluations", Robert Novack, et al., pp. 1-2 (1997).
	"Combustion Optimization Using MPV Systems", Mark Khesin, et al., Pittsburgh Coal Conference, September 2000, pp. 1-4.
	"Reburn Systems", GE Power Systems, Air Quality Systems & Services, pp. 1-3, GEA-13207 (2001).
	"FlamemastEER™ Low NO <sub>x</sub> Burners", GEA-13132, p. 1, printed December 2003.
	"NO <sub>x</sub> Control for Gas Turbines", GE Power Systems, pp. 1-2, printed December 17, 2003.

*Examiner	Date Considered
-----------	-----------------

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

## INFORMATION DISCLOSURE CITATION

ATTY. DOCKET NO.

**SERIAL NO.**

839-1521

10/705,820

**APPLICANT**

Roy Payne et al

(Use several sheets if necessary)

**FILING DATE**

**GROUP**

November 13, 2003

3746

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

							TRANSLATION	
DOCUMENT			DATE	COUNTRY	CLASS	SUBCLASS	YES	NO

**OTHER DOCUMENTS** (including Author, Title, Date, Pertinent pages, etc.)

	"NO <sub>x</sub> Control for Boilers", GE Power Systems, pp. 1-2, printed December 17, 2003.
	"Coallogic™", GE Power Systems, pp. 1-2, printed December 17, 2003.
	"Coal Balancing & Blending", GE Power Systems, pp. 1-2, printed December 17, 2003.
	"NO <sub>x</sub> Reduction", Hamon, pp. 1-2, December 8, 2003.
	"Selective Catalytic Reduction (SCR)", Hamon, pp. 1-2, printed December 8, 2003.
	"Selective Non-Catalytic Reduction (SNCR)", Hamon, pp. 1-3, printed December 8, 2003.
	"SCR SNCR Hybrid System", Hamon, pp. 1-2, December 8, 2003.
	"Evaluation of the Effect of SCR NO <sub>x</sub> Control Technology on Mercury Speciation", Feeley, III et al., March 2003, pp. 1-11.
	John H. Pavlish et al., "Status Review Of Mercury Control Options For Coal-Fired Power Plants", pp. 89-165, Fuel Processing Technology 82 (2003).
	Thomas D. Brown et al., "Mercury Measurement And Its Control: What We Know, Have Learned, and Need To Further Investigate", Journal of the Air & Waste Management Association, pp. 628-640, Volume 49, June 1999.
	Blair A. Folsom et al., "Combustion Modification – An Economic Alternative for Boiler NO <sub>x</sub> Control", GE Power Systems, GER-4192, pp. 1-8, April 2001.
	R. Sehgal et al., "Intelligent Optimization of Coal Burning to Meet Demanding Power Loads, Emission Requirements, and Cost Objectives", GE Power Systems, GER-4198, pp. 1-14, October 2000.
	The Washington Post, "Limiting Mercury Pollution Is Focus of Hot Debate", pp. A3, March 15, 2004.

\*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)